

Commentary: This connection closely resembles the “prescriptive connection” commonly in use prior to the 1994 Northridge earthquake. After significant study, it has been concluded that with several improvements and appropriate levels of quality assurance with regard to workmanship and materials, this connection can perform reliably in frames designed as Ordinary Moment Frames (OMF) within the limitations indicated in Table 3-2.

The improvements incorporated in this connection over typical connections detailed prior to the 1994 Northridge earthquake include the following:

1. *Weld metal with appropriate toughness;*
2. *Removal of weld backing from bottom-beam-flange-to-column-flange welds, back-gouging and addition of a reinforcing fillet weld;*
3. *Use of improved weld access hole shape and finish;*
4. *Improvements to weld quality control, and quality assurance requirements and methods.*

Table 3-2 Prequalification Data WUF-B Connections

General:	
Applicable systems	Ordinary Moment Frame
Hinge location distance s_h	$d_c/2 + d_b/2$
Critical Beam Parameters:	
Maximum depth	W36 and shallower
Minimum span-to-depth ratio	7
Flange thickness	1” maximum
Permissible material specifications	A572 Grade 50, A992, A913 Grade 50/S75
Critical Column Parameters:	
Depth	W8, W10, W12, W14
Permissible material specifications	A572 Grade 50; A913 Grade 50 and 65; A992
Beam/Column Relations:	
Panel Zone strength	No Requirement (OMF)
Column/beam bending strength	No Requirement (OMF)
Connection Details	
Web connection	Shear tab welded to column, bolted to beam.
Continuity plate thickness	Section 3.3.3.1
Flange welds	See Fig. 3-8 and Section 3.3.2.5
Welding parameters	Section 3.3.2.4, 3.3.2.5, 3.3.2.6
Weld access holes	Section. 3.3.2.7